

We claim:

1. A process for rectificatively separating liquids comprising (meth)acrylic monomers in a rectification column by withdrawing a stream from the rectification column at at least one withdrawal point during rectification, treating the stream withdrawn and, after the treatment, recycling at least a portion of this stream as a liquid phase into the rectification column at at least one recycle point, wherein the content C_R in the liquid phase recycled into the rectification column of molecular oxygen, expressed in percent of the weight of this phase, is at least twice as high as the content C_F of molecular oxygen present in the reflux liquid of the rectification column at the recycle point and expressed in percent of the weight of the reflux liquid.
2. A process as claimed in claim 1, wherein the C_R/C_F ratio is ≥ 5 .
3. A process as claimed in claim 1, wherein the C_R/C_F ratio is ≥ 20 .